

## SAFETY PRECAUTIONS

### SERVICE WARNING

Only qualified service technicians who are familiar with safety checks and guidelines should perform service work. Before replacing parts, disconnect power source to protect electrostatically sensitive parts. Do not attempt to modify any circuit unless so recommended by the manufacturer. When servicing the receiver, use an isolation transformer between the line cord and power receptacle.

### SERVICING THE HIGH VOLTAGE AND CRT

Use EXTREME CAUTION when servicing the high voltage circuits. To discharge static high voltage, connect a 10K ohms resistor in series with a test lead between the receiver and CRT anode lead. DO NOT lift the CRT by the neck. Always wear shatterproof goggles when handling the CRT to protect eyes in case of implosion.

### X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Be aware of the instructions and procedures covering X-ray radiation. In solid-state receivers and monitors, the CRT is the only potential source of X-rays. Keep an accurate high voltage meter available at all times. Check meter calibration periodically. Whenever servicing a receiver, check the high voltage at various brightness levels to be sure it is regulating properly. Keep high voltage at rated value, NO HIGHER. Excessive high voltage may cause X-ray radiation or failure of associated components. DO NOT depend on protection circuits to keep voltage at rated value. When troubleshooting a receiver with excessive high voltage, avoid close contact with the CRT. DO NOT operate the receiver longer than necessary. To locate the cause of excessive high voltage, use a variable AC transformer to regulate voltage. In present receivers, many electrical and mechanical components have safety related characteristics which are not detectable by visual inspection. Such components are identified by a # on both the schematic and the parts list. For SAFETY, use only equivalent replacement parts when replacing these components.

### GENERAL GUIDELINES

Perform a final SAFETY CHECK before returning receiver to customer. Check repaired area for poorly soldered connections, and check entire circuit board for solder splashes. Check inner board wiring for pinched wires or wires contacting any high wattage resistors. Check that all control knobs, shields, covers, grounds, and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.

#### TEST JIG HOOKUP

Function	Chek-A-Color Adapter No.	PC Board Plug No.	Pin	Color
CRT	B239	KX	1	Red
Yoke	D4137		3	Blue
Yoke Setting	YP1		4	Yellow
Comments	Focus Tap		5	Green

#### HIGH VOLTAGE SHUTDOWN TEST

Apply 120VAC, turn the receiver on, and set all customer controls for normal operation. Measure the voltage at TP7. Voltage should measure between 16.5V and 21.0V. If voltage exceeds this range the circuit must be repaired. Momentarily connect a jumper between TP7 and the cathode of D421. The receiver should lose raster and sound. If receiver does not lose raster and sound, the shutdown circuit should be repaired. To resume normal operation, remove AC power for 30 seconds and then restore AC power.

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by Howard W. Sams & Company as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to Howard W. Sams & Company by the manufacturers of the specific type of replacement part listed.

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A Bell Atlantic Company

2647 Waterfront Parkway East Drive, Suite 100

Indianapolis, IN 46214-2041

Printed in the United States of America 5 4 3 2 1



99PF01494



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# PHOTOFAC<sup>®</sup> Technical Service Data

SET 4147

### INDEX

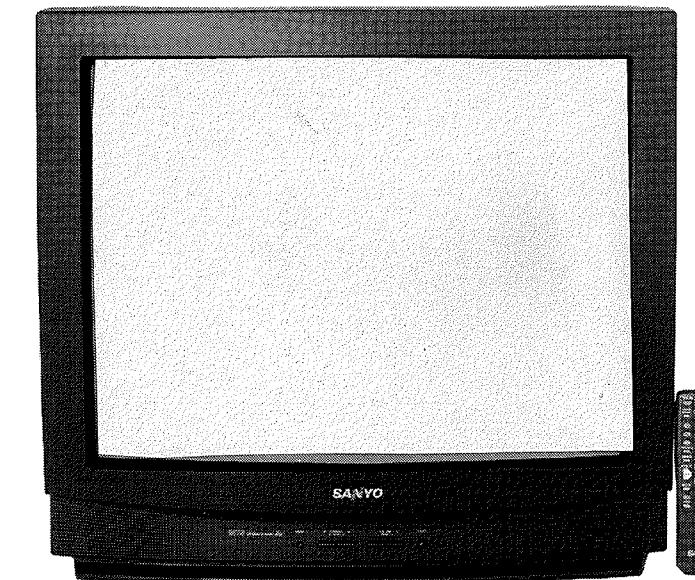
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MODEL DS27580 (CHASSIS 27580-00)

For Supplier Address,  
See PHOTOFAC Annual Index

**SANYO**

Model DS27580 (Chassis 27580-00)



Essential coverage  
for servicing a television receiver...

- Schematics
- Component locations
- Parts list



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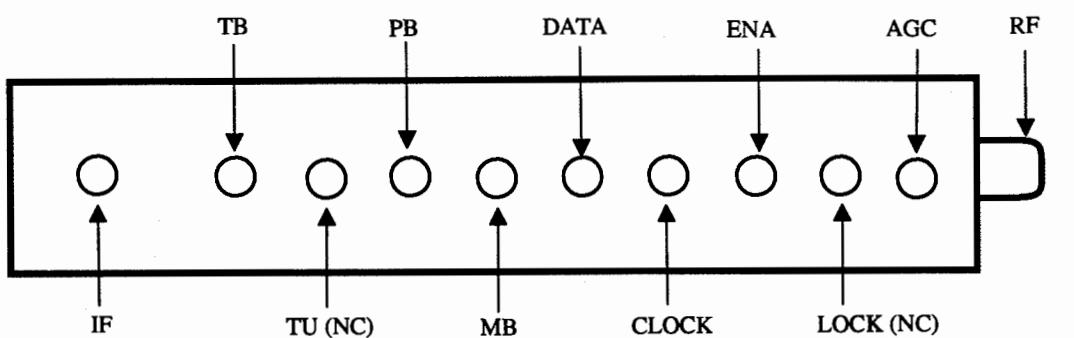
JUNE 1999 SET 4147

## TUNER INFORMATION

TUNER VOLTAGE CHART			
Pin	VHF Low Band	VHF High Band	UHF Band
AGC	5.7V	5.1V	4.6V
LOCK (NC)	1.8V	4.3V	5.5V
ENA	.1V	.1V	.1V
CLOCK	.1V	.1V	.1V
DATA	0V	0V	0V
MB	9.0V	9.0V	9.0V
PB	5.0V	5.0V	5.0V
TU (NC)	4.7V	4.7V	4.7V
TB	34.3V	34.3V	34.3V
IF	0V	0V	0V

NOTE: VHF Low Band voltages taken on channel 2.  
VHF High Band voltages taken on channel 7.  
UHF Band voltages taken on channel 14.

## TUNER TERMINAL GUIDE



## SCHEMATIC NOTES

# For SAFETY use only equivalent replacement part, see parts list.

\* Circuitry not used in some versions.

-- Circuitry used in some versions.

± Ground

■ Chassis ground

△ Common tie point

△ Taken from common tie point

3 Schematic CIRCUITRACE ® Voltage source tie point.

A— Cabling: Heavy lines reduce use of multiple lines.

Waveforms and voltages are taken from ground, unless noted otherwise.

Waveforms taken with triggered scope and colorbar signal. Waveform voltage is peak to peak. Timebase is per division. Waveforms shown at 10 divisions.

Supply voltages maintained as seen at input.

Voltages measured with digital meter and a 1000µV RF signal, with colorbar pattern, applied to antenna terminal.

Controls adjusted for normal operation.

Capacitors are 50 volts or less, 5% or greater unless noted. Electrolytic capacitors are 50 volts or less, 20% or greater unless noted.

Resistors are 1/2W or less, 5% or greater unless noted.

Value in ( ) used in some versions.

Measurements with switching as shown, unless noted.

Rated voltage shown on zener diodes.

## MISCELLANEOUS ADJUSTMENTS

## SUB TINT

Tune in a picture. Set tint at center of its range level. Enter the service mode and select service number 27. Set the value to achieve normal flesh tones.

## SUB SHARPNESS

Tune in a picture. Set brightness to minimum. Set picture to maximum. Enter the service mode and select service number 28. Set the value to achieve normal contrast range.

## OSD HORIZONTAL POSITION

Tune in a local channel. Enter the service mode and select service number 31. Set the value to center the menu on the screen.

## VIDEO INPUT LEVEL

Connect a video signal of 1.0Vp-p to the video input jack. Set receiver to video mode. Connect scope to the base of Q202, adjust VR1023 for 2.0Vp-p ± 0.2Vp-p on the scope. Set the receiver to TV mode, and press the reset button twice on the remote control. Check brightness and contrast on all channels and readjust if needed.

## SOUND

Tune in a local channel. Confirm that the voltage at pin 50 of IC101 is 3.85V ± 0.2V, otherwise adjust T131 for 3.85V ± 0.2V.

## STEREO ADJUSTMENTS

All adjustments were made using an MTS/TV-stereo generator connected to the antenna terminal. Set customer controls for normal listening levels. Select stereo mode.

## Input Level

Set generator to 1kHz audio frequency and L-R modulating signal. Connect an oscilloscope to pin 7 of IC3401. Enter service mode and select service number 32. Set the data value for 0.7Vp-p waveform.

## Stereo VCO

Connect a jumper between the base of Q135 and ground. Connect a frequency counter to pin 40 of IC3401 and ground. Enter the service mode and select service number 33. Set the data value for 15.734kHz ±100Hz.

## SAP VCO

Connect a jumper between the base of Q135 and ground. Connect a 1M ohm resistor between pin 12 of IC3401 and ground. Connect a frequency counter to pin 40 of IC3401 and ground. Enter the service mode and select service number 37. Set the data value for 78.67kHz ±500Hz.

## Filter

Enter the service mode and select service number 34. Set the data value to 32.

## Separation

Set generator to pilot, 300Hz audio frequency, and left modulating signal. Connect an oscilloscope to pin 25 of IC3401 and ground. Enter the service mode and select service number 35. Set the data value for minimum amplitude of the waveform. Set generator to 8kHz audio frequency. Select service number 36 and set the data value for minimum amplitude of the waveform.

## HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, color, picture, and screen control to minimum. Connect a high voltage probe to CRT anode. High voltage should measure 27.5kV to 29kV.

## PURITY AND CONVERGENCE

No adjustment is recommended, the CRT has a bonded yoke.

## ENTERING SERVICE MODE

Disconnect the AC power cord. While pressing the menu button on the front of the set, connect the AC power cord. Use the channel up and down buttons to select the service number. Use volume up and down buttons to change the value.

## EXIT SERVICE MODE

To exit service mode, press the menu button.

## HORIZONTAL POSITION

Tune in a crosshatch pattern. Enter the service mode and select service number 01. Set the value for the best horizontal centering.

## RF AGC DELAY

Tune in a picture. Enter the service mode and select service number 03. Set the value to a point where no snow (noise) appears in picture. Check all channels for proper operation.

## VERTICAL SIZE

Tune in a crosshatch pattern. Enter the service mode and select service number 07. Set the value to achieve proper vertical size and best vertical linearity.

## VERTICAL CENTERING

Tune in a crosshatch pattern. Check that the pattern is centered. If too low, install resistor R513 (470 ohms, 1W). If too high, install resistor R512 (470 ohms, 1W).

## GRAY SCALE

Tune in an active channel. Enter the service mode. Set the value of service numbers 08, 09, and 10 to 0. Set the value of service numbers 11 and 12 to 55. Set screen control, color, brightness, and picture to minimum. Adjust screen control, if necessary, to obtain a barely visible horizontal line. Select service number 41. Adjust the bias levels for a white line. Select service number 40 and adjust the drive values for normal black and white picture at all brightness levels.

## SUB BRIGHTNESS

Tune in a color bar pattern. Set picture and brightness to normal. Connect positive lead of a digital voltmeter to TP51 and the negative lead to TP50. Enter the service mode and select service number 25. Adjust value for 520mV ±10mV.

## SUB COLOR

Tune in a picture. Set color at center of its range level. Enter the service mode and select service number 26. Set the value to achieve normal color level.

## MISCELLANEOUS ADJUSTMENTS continued

### IC802 REPLACEMENT

Perform the following adjustments after replacing IC802. Enter the service mode, select service number 01, and set value to 13. Select service number 11, and set value to 64. Select service number 12 and set value to 64. Select service number 13 and set value to 1. Select

service number 14 and set value to 1. Select service number 21 and set value to 7. Select service number 26 and set value to 8. Select service number 27 and set value to 18. Select service number 29 and set value to 36. Select service number 30 and set value to 2. Select service number 31 and set value to 40. Exit service mode.

### SERVICE MODE ADJUSTMENT CHART

Service No.	Adjustment	Value Range	Initial Value	On-Set Value	Notes
01	HP	0 - 31	13	17	H-Position (H-Centering)
02	IAS	0, 1	0	0	IF AGC Switch, 0 = TV (Normal), 1 = AV (IF Gain Minimum)
03	RAD	0 - 63	50	35	RF AGC Delay
04	PT	0 - 127	64	61	PLL Tuning
05	ADA	0 - 63	31	31	APC Detect
06	CD	0, 1	0	0	C-Diff
07	VS	0 - 63	32	25	Vertical Size
08	RB	0 - 127	0	44	Red Bias
09	GB	0 - 127	0	34	Green Bias
10	BB	0 - 127	0	0	Blue Bias
11	RD	0 - 127	64	68	Red Drive
12	BD	0 - 127	64	55	Blue Drive
13	TDS	0, 1	1	1	Trap & D (B.P.F.) Switch, 0 = Off, 1 = On
14	AF	0, 1	0	1	Auto Flesh, 0 = Off, 1 = On
15	BS	0, 1	0	0	Black Stretch, 0 = On, 1 = Off
16	VL	0 - 7	4	4	Video Level
17	FL	0 - 31	15	19	FM Level
18	NIS	0, 1	1	1	Black Noise Inverter, 0 = On, 1 = Off
19	ABL	0, 1	1	1	ABL Defeat, 0 = On, 1 = Off
20	WP	0, 1	1	1	White Peak, 0 = On, 1 = Off
21	GD	0 - 15	8	7	Green Drive Reduction
22	VC	0 - 7	0	0	Vert. Comp
23	VD	0 - 63	32	32	Vert. DC
24	AG	0 - 3	3	0	AFC Gain
25	SB	0 - 63	32	29	Sub Brightness
26	SCO	0 - 31	12	8	Sub Color
27	STI	0 - 31	11	20	Sub Tint
28	SSH	0 - 15	8	8	Sub Sharpness
29	OPT	0 - 255	0	36	Option, data 1 should be to "36", in binary 8 bit 00100100
30	OP2	0 - 255	0	0	Option, data 2 should be to "2", in binary 8 bit 00000010
31	HR	0 - 63	47	40	OSD H-Position
32	INP	0 - 63	32	15	Input Level
33	STE	0 - 63	32	24	Stereo VCO
34	FIL	0 - 63	63	28	Filter
35	LSP	0 - 63	32	14	Low Separation
36	HSP	0 - 63	32	10	High Separation
37	SPV	0 - 63	32	27	SAP VCO
38	PCO	0 - 63	32	32	PIP Color
39	PTI	0 - 63	32	32	PIP Tint
40	DRV	0 - 127	55	68	Red Drive, press 1 to decrease value and 3 to increase value
	DRV	0 - 127	55	55	Blue Drive, press 7 to decrease value and 9 to increase value
41	-	0 - 127	0	-	Red Bias, press 1 to decrease value and 3 to increase value
	-	0 - 127	0	-	Green Bias, press 4 to decrease value and 6 to increase value
	-	0 - 127	0	-	Blue Bias, press 7 to decrease value and 9 to increase value

### TEST EQUIPMENT

Test equipment listed by participating manufacturer illustrates typical or equivalent equipment used by Sams engineers to obtain measurements. This equipment is compatible with most types used by field service technicians.

Equipment	Sencore No.	Equipment	Sencore No.
Oscilloscope	SC3100	Isolation Transformer	PR570
Generators		Capacitance Analyzer	LC102
RGB	CM2125	CRT Analyzer	CR7000
Multiburst Signal	VG91	AC Leakage Tester	PR570
Color Bar	VG91	Inductance Analyzer	LC102
TV Stereo	VG91	Flyback Yoke Tester	TVA92
Digital VOM	SC3100	Field Strength Meter	SL753
Frequency Meter	SC3100	Transistor Tester	TF46
Hi-Voltage Probe	HP200	Horizontal Analyzer	HA-2500
Accessory Probes	TP212	Video Analyzer	VG91, TVA92

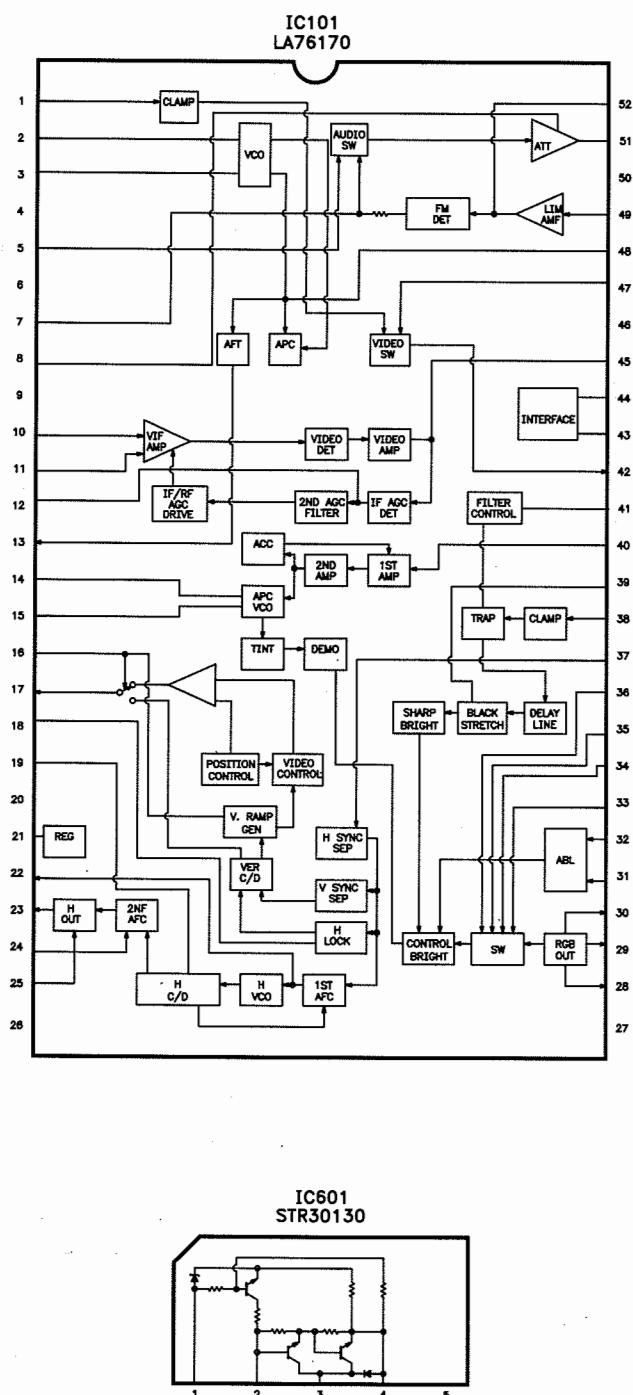
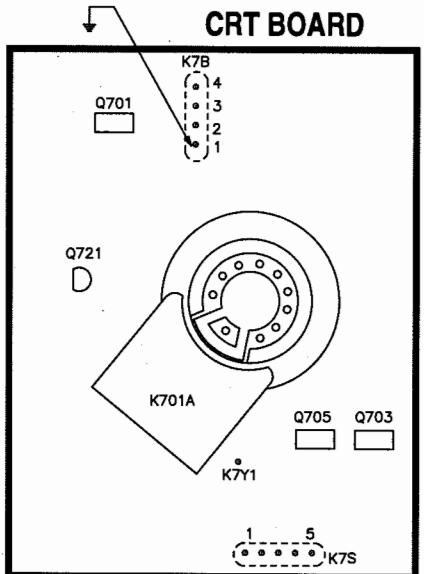
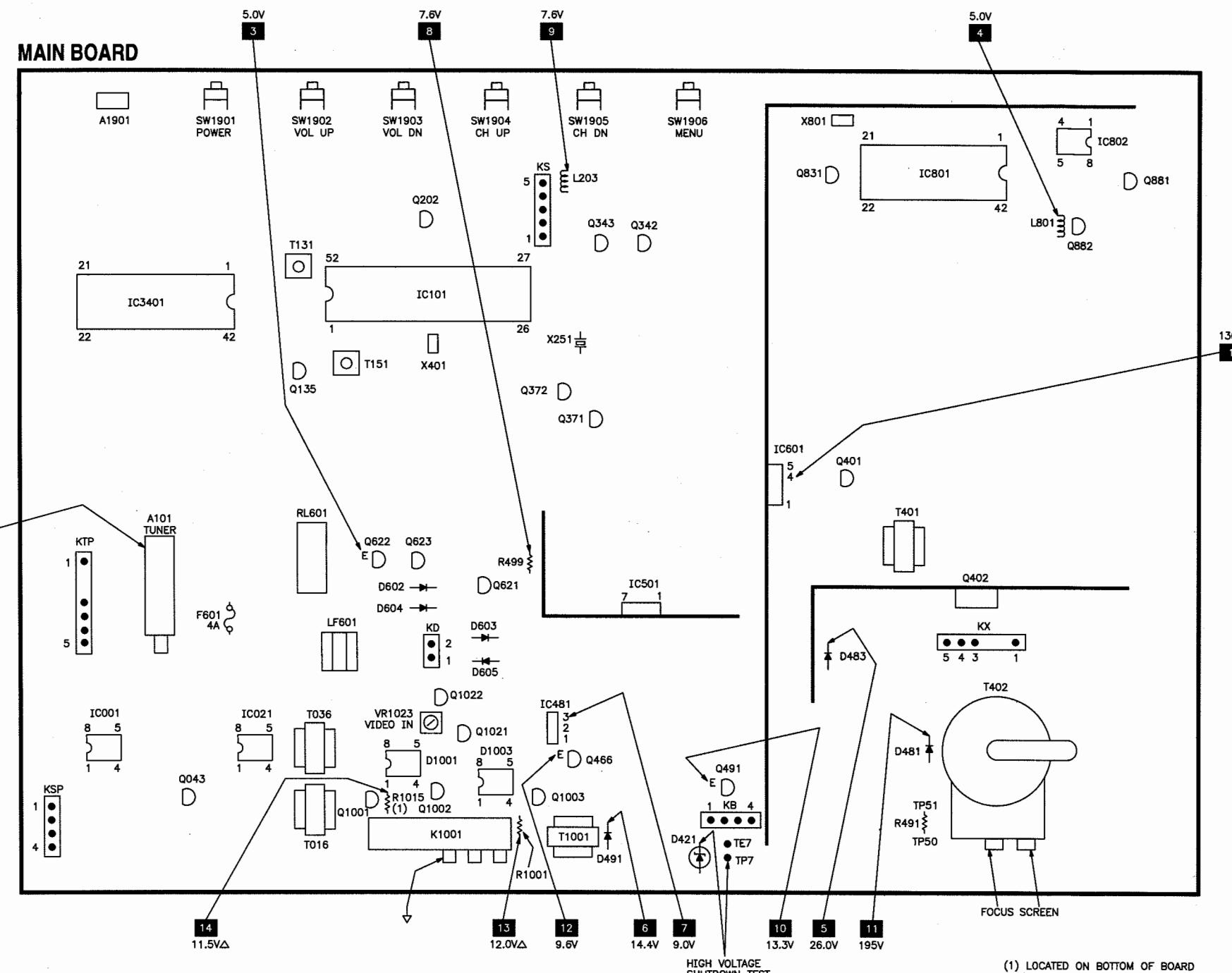


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J. Barker, N. Beck, B. Buchanan,  
T. Clensy, G. Farrell, B. Fink,  
M. Herkless, J. Kocha, F. Malek,  
B. Medaris, R. Raus, B. Skinner

# PLACEMENT CHART

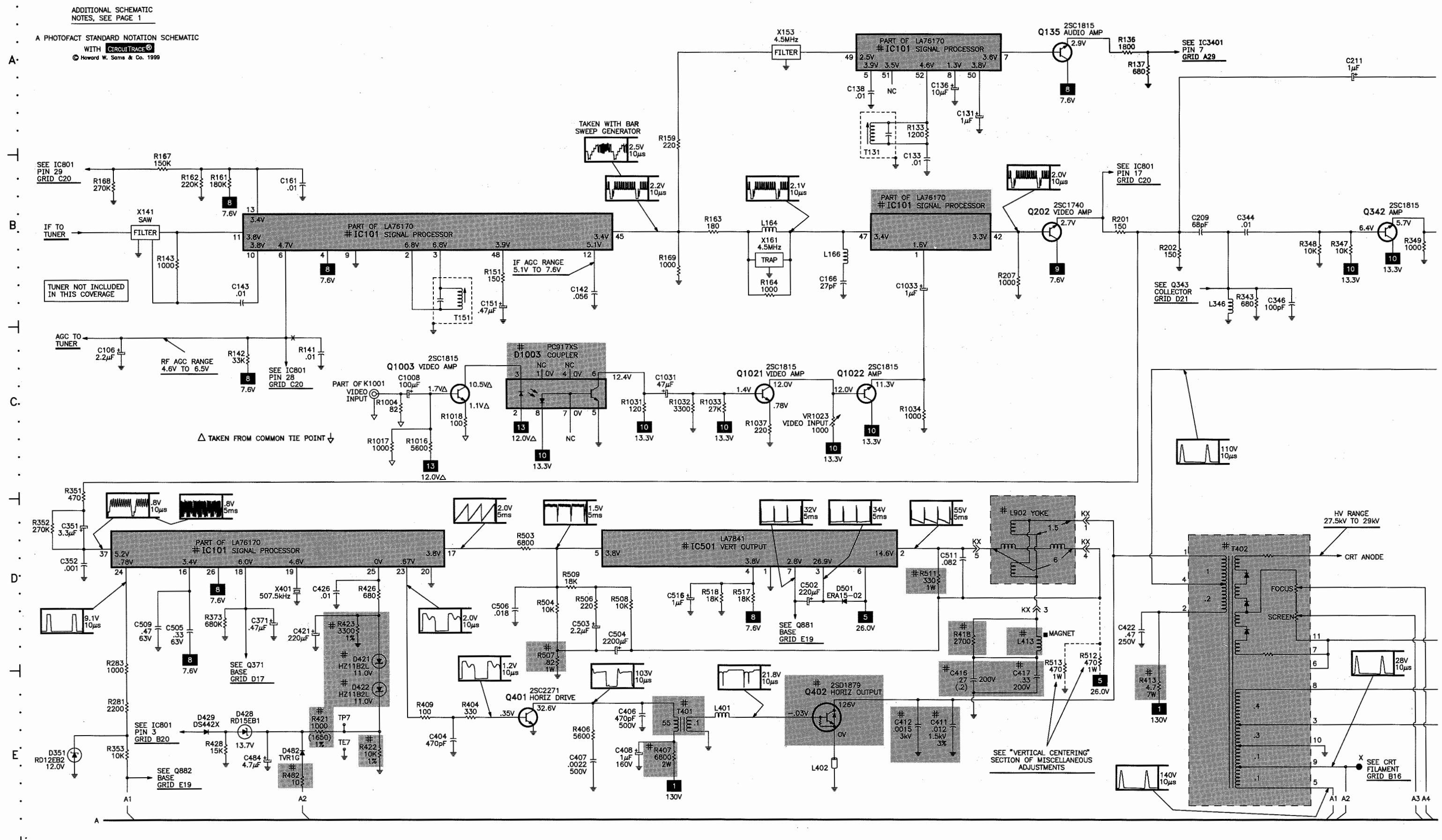
# IC FUNCTIONS



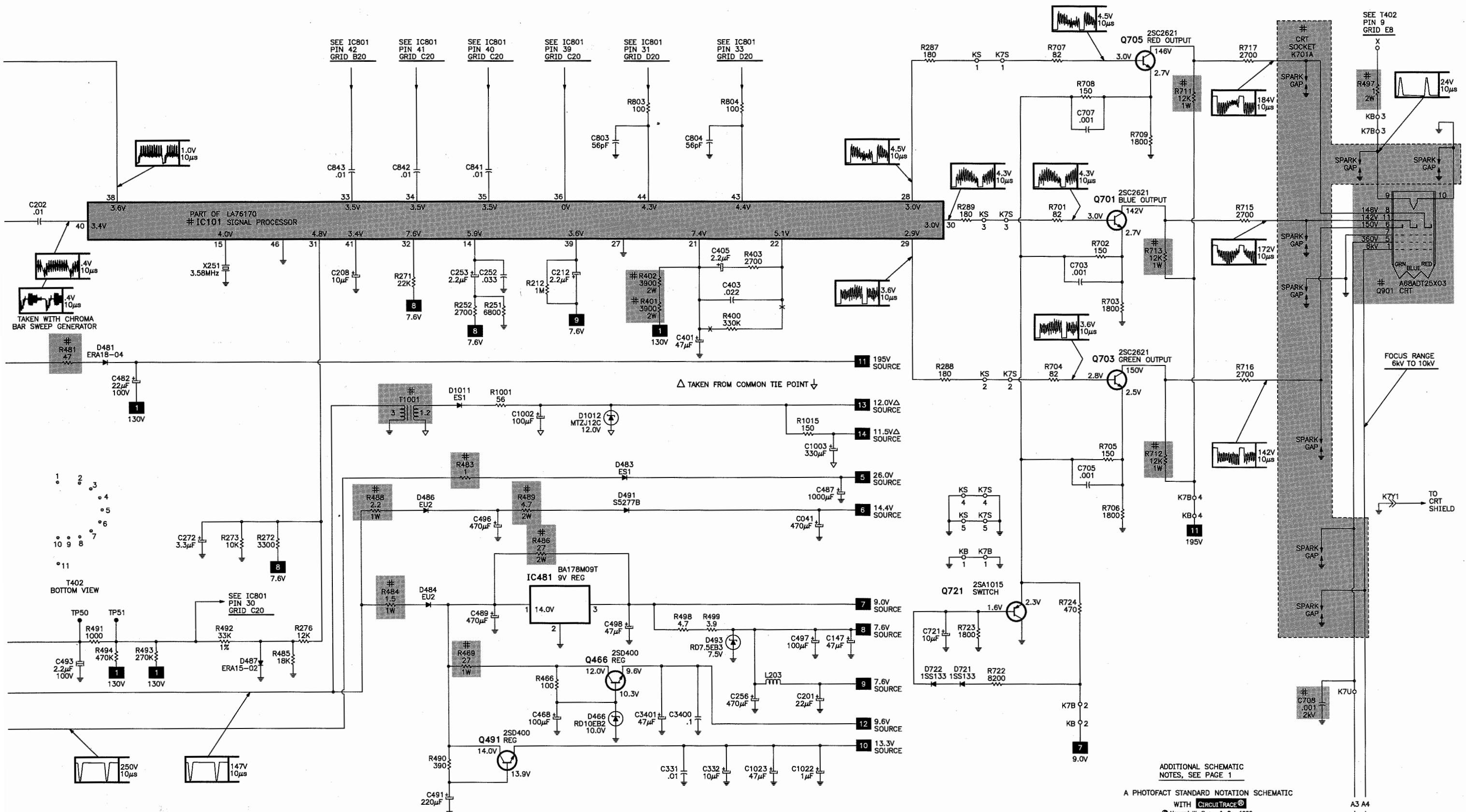
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## TELEVISION SCHEMATIC

B



## **TELEVISION SCHEMATIC** continued



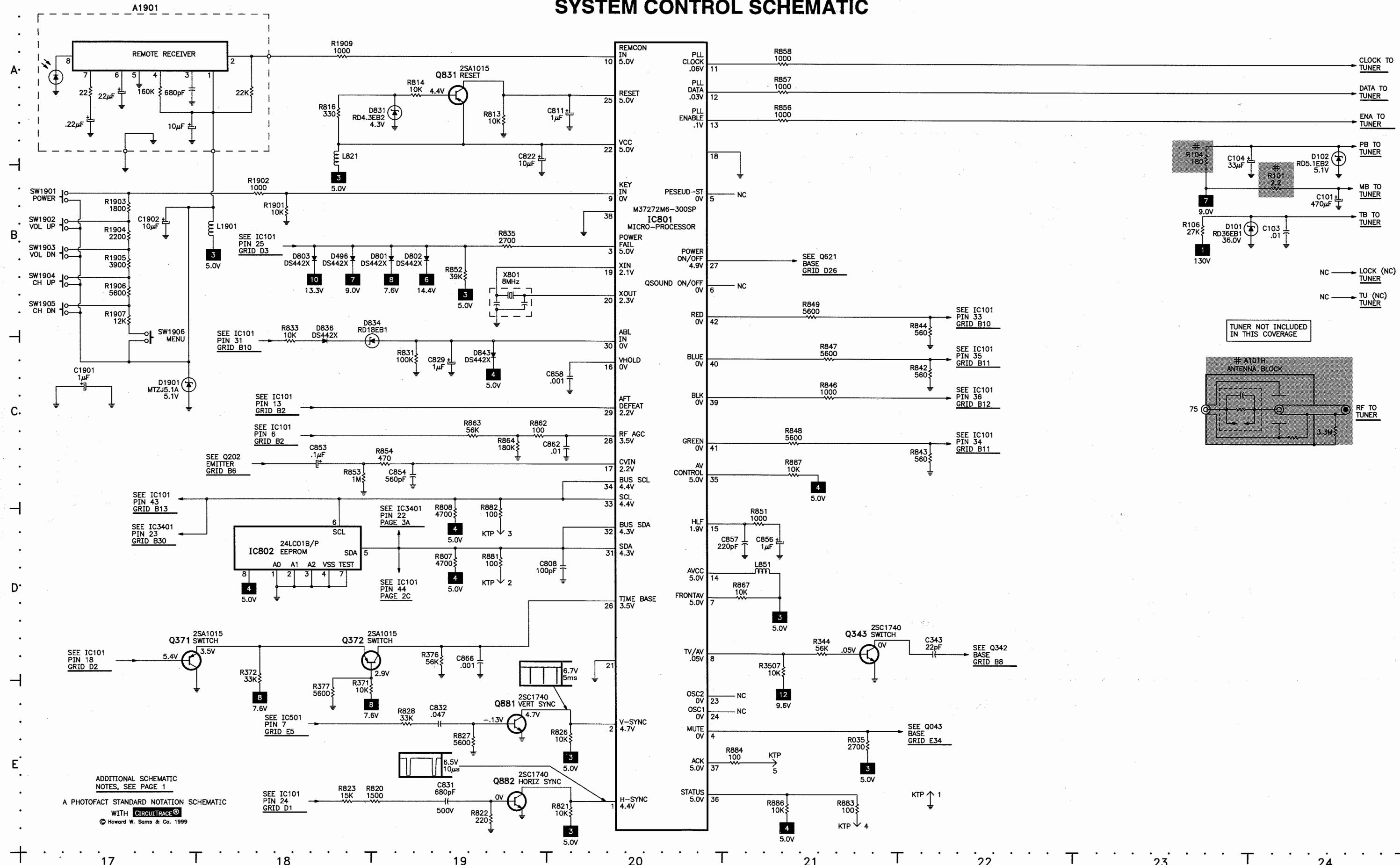
ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 1

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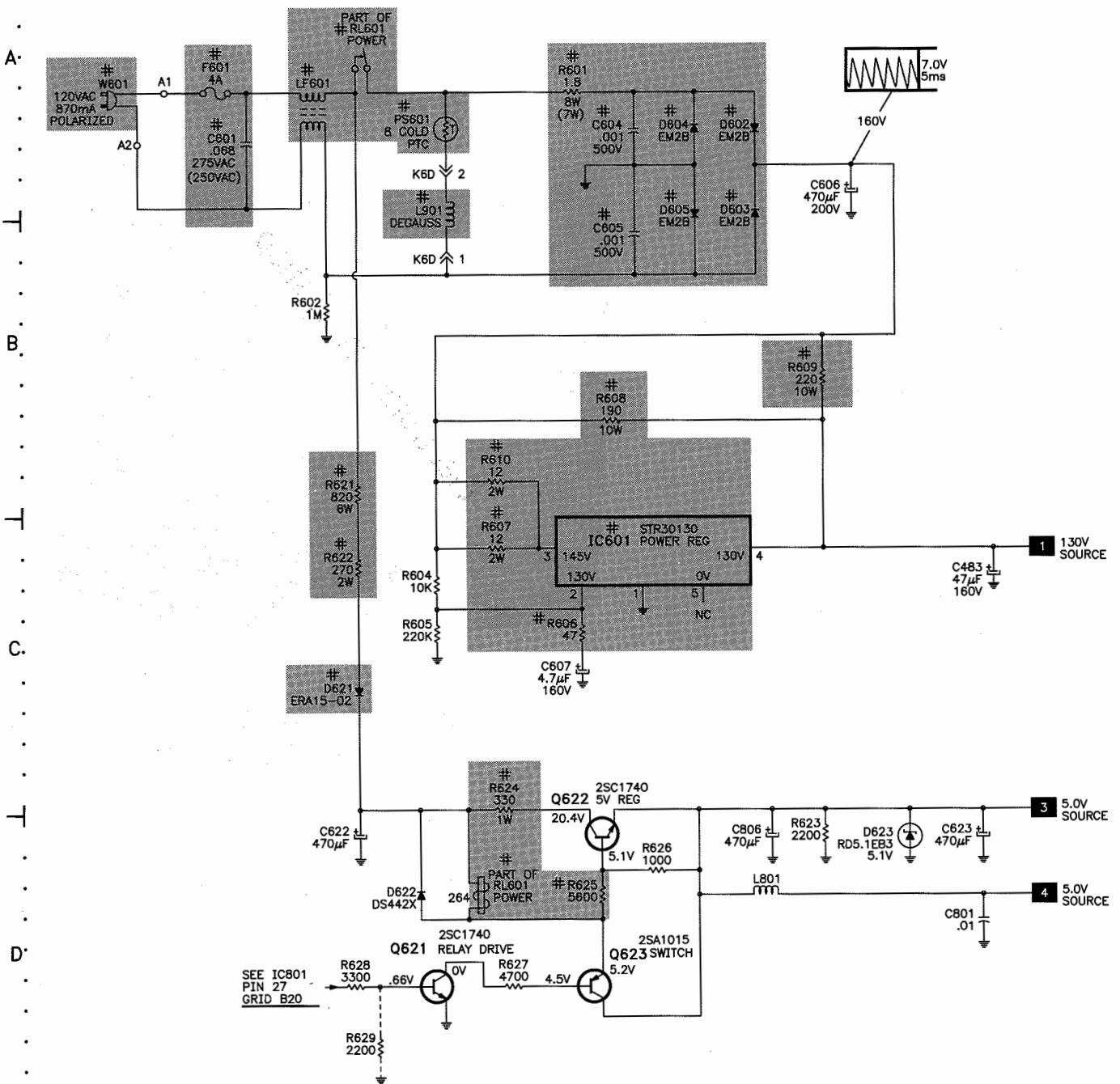
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## **SYSTEM CONTROL SCHEMATIC**

F



# G POWER SUPPLY SCHEMATIC



## Important Parts Information

- The parts listed here are those not usually available from a well-stocked supply cabinet or bin.
- Where items may be replaced with equivalent parts, several alternates are shown from participating vendors.
- On the parts lists, safety items are marked with a # to remind you that only exact replacements are recommended for these items.
- When ordering parts, state the model number, part number, and description.

## Obtaining Parts

Many of these parts are available from your local Sams authorized distributor or the manufacturer of the equipment. Call Sams for the name of your nearest distributor:

800-428-7267

Or consult the Sams Annual Index for the address of the original equipment manufacturer.

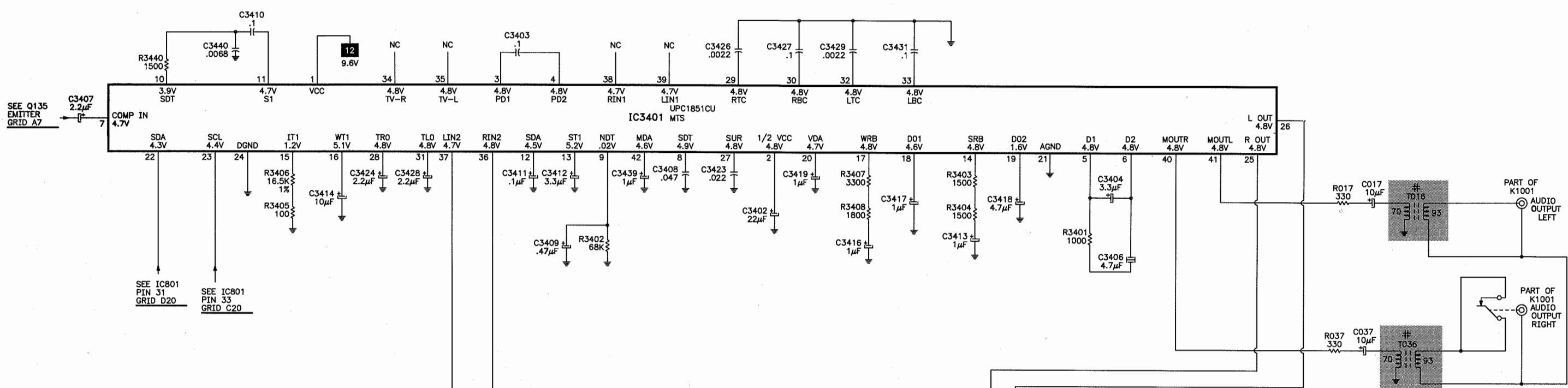
## Participating Vendors

Information on test equipment and replacement parts is listed in these pages for the following participating vendors. Consult the Sams Annual Index for their current address.

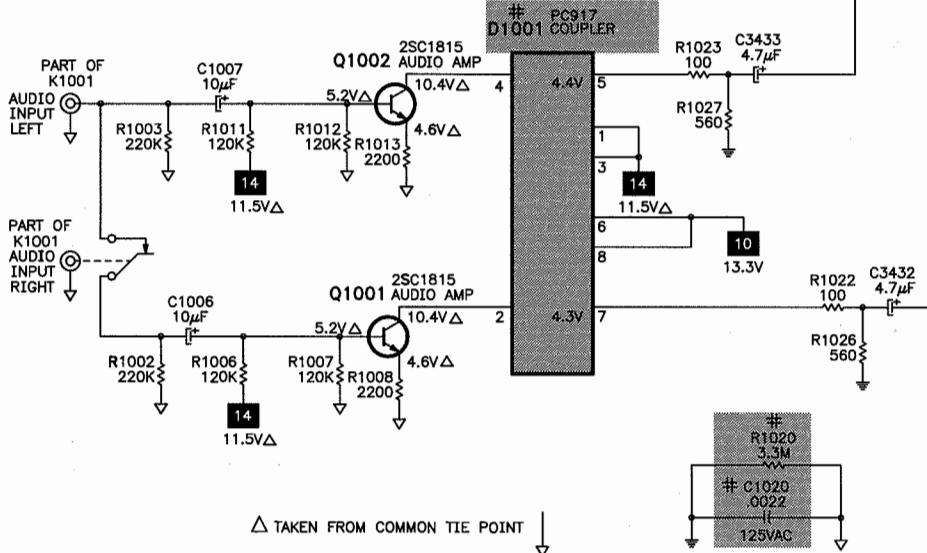
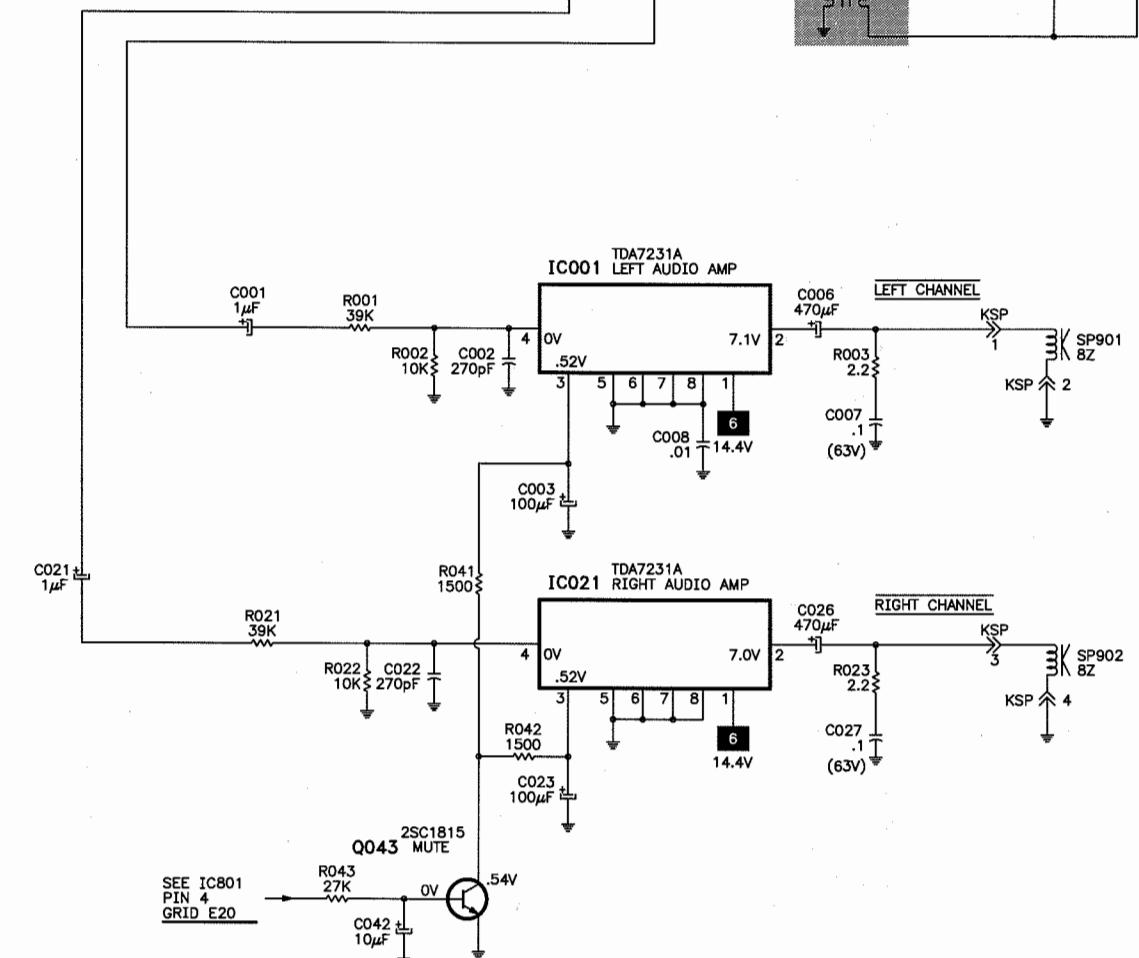
▪ Custom Components Corporation (Chek-A-Color)	▪ Terrell & Nobis (TNI Electronics)
▪ NTE Electronics, Inc. (NTE)	▪ Sencore, Inc.
▪ Philips ECG Company (ECG)	▪ Thomson Consumer Electronics, Inc. (SK, TCE)

A

## AUDIO SCHEMATIC



B



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ADDITIONAL SCHEMATIC  
NOTES, SEE PAGE 1

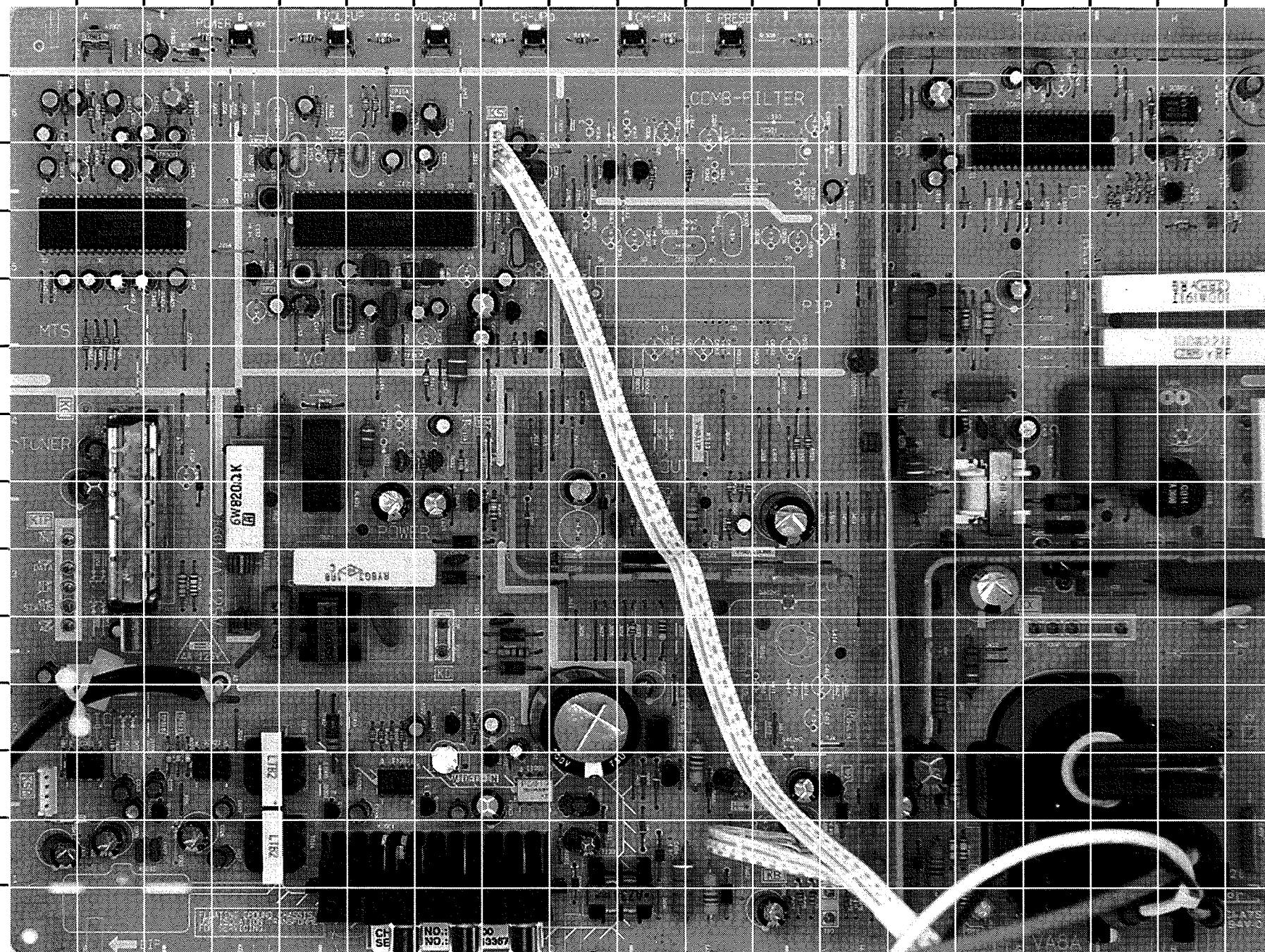
## SCHEMATIC COMPONENT LOCATION GUIDE

A1901	A-17	C487	D-13	C3408	B-32	IC101	B-3	R101	B-24	R484	D-11	R816	A-18	R1909	A-18
C001	D-34	C489	D-11	C3409	B-31	IC101	B-6	R104	B-23	R485	D-10	R820	E-18	R3401	B-34
C002	D-35	C491	E-11	C3410	A-30	IC101	D-2	R106	B-23	R486	D-11	R821	E-20	R3402	B-32
C003	D-35	C493	D-9	C3411	B-31	IC481	D-11	R133	A-6	R488	D-10	R822	E-19	R3403	B-33
C006	D-35	C496	D-11	C3412	B-31	IC501	D-4	R136	A-7	R489	D-11	R823	E-18	R3404	B-33
C007	D-36	C497	D-13	C3413	B-33	IC601	C-26	R137	A-7	R490	E-11	R826	E-20	R3405	B-30
C008	D-35	C498	D-12	C3414	B-30	IC801	B-20	R141	C-2	R491	D-9	R827	E-19	R3406	B-30
C017	B-35	C502	D-5	C3416	B-33	IC802	D-18	R142	C-2	R492	D-10	R828	E-19	R3407	B-33
C021	D-33	C503	D-4	C3417	B-33	IC3401	A-32	R143	B-1	R493	D-9	R831	C-19	R3408	B-33
C022	D-34	C504	D-4	C3418	B-34	K1001	B-36	R151	B-3	R494	D-9	R833	C-18	R3440	A-29
C023	E-35	C505	D-1	C3419	B-33	K1001	C-29	R159	B-4	R497	A-16	R835	B-19	R3507	D-21
C026	D-35	C506	D-3	C3423	B-32	K1001	C-3	R161	B-2	R498	D-12	R842	C-22	RL601	A-26
C027	E-36	C509	D-1	C3424	B-31	L164	B-5	R162	B-2	R499	D-12	R843	C-22	RL601	D-26
C037	C-35	C511	D-6	C3426	A-32	L166	B-5	R163	B-4	R503	D-3	R844	C-22	SP901	D-36
C041	D-13	C516	D-4	C3427	A-33	L203	E-13	R164	B-5	R504	D-4	R846	C-21	SP902	D-36
C042	E-34	C601	A-25	C3428	B-31	L346	B-7	R167	B-1	R506	D-4	R847	C-21	SW1901	B-17
C101	B-24	C604	A-26	C3429	A-33	L401	E-4	R168	B-1	R507	D-4	R848	C-21	SW1902	B-17
C103	B-24	C605	B-26	C3431	A-33	L402	E-5	R169	B-4	R508	D-4	R849	C-21	SW1903	B-17
C104	B-23	C606	B-27	C3432	D-31	L413	D-6	R201	B-7	R509	D-4	R851	D-21	SW1904	B-17
C106	C-1	C607	C-26	C3433	C-31	L801	D-27	R202	B-7	R511	D-6	R852	B-19	SW1905	B-17
C131	A-6	C622	D-26	C3439	B-32	L821	B-18	R207	B-6	R512	D-7	R853	C-18	SW1906	C-17
C133	B-6	C623	D-28	C3440	A-30	L851	D-21	R212	B-11	R513	E-6	R854	C-19	T016	B-35
C136	A-6	C703	B-14	D101	B-23	L901	B-26	R251	C-11	R517	D-5	R856	A-21	T036	C-35
C138	A-5	C705	D-14	D102	B-24	L902	D-6	R252	C-11	R518	D-4	R857	A-21	T131	A-5
C142	B-4	C707	B-14	D351	E-1	L1901	B-18	R271	B-11	R601	A-26	R858	A-21	T151	B-3
C143	B-2	C708	E-16	D421	D-3	LF601	A-25	R272	D-10	R602	B-25	R862	C-19	T401	E-4
C147	D-13	C721	D-14	D422	E-3	PS601	A-26	R273	D-10	R604	C-26	R863	C-19	T402	D-7
C151	B-3	C801	D-28	D428	E-2	Q043	E-34	R276	D-10	R605	C-26	R864	C-19	T1001	C-11
C161	B-2	C803	B-12	D429	E-2	Q135	A-6	R281	E-1	R606	C-26	R867	D-21	VR1023	C-5
C166	B-5	C804	B-12	D466	E-12	Q202	B-6	R283	E-1	R607	C-26	R881	D-19	W601	A-25
C201	E-13	C806	D-27	D481	C-9	Q342	B-8	R287	A-13	R608	B-26	R882	D-19	X141	B-1
C202	B-9	C808	D-20	D482	E-2	Q343	D-21	R288	C-14	R609	B-27	R883	E-21	X153	A-5
C208	B-10	C811	A-20	D483	C-12	Q371	D-17	R289	B-14	R610	C-26	R884	E-20	X161	B-5
C209	B-7	C822	B-19	D484	D-11	Q372	D-18	R343	B-7	R621	C-26	R886	E-21	X251	B-10
C211	A-8	C829	C-19	D486	D-11	Q401	E-3	R344	D-21	R622	C-26	R887	C-21	X401	D-2
C212	B-12	C831	E-19	D487	D-10	Q402	E-5	R347	B-8	R623	D-27	R1001	C-11	X801	B-19
C252	B-11	C832	E-19	D491	D-12	Q466	E-12	R348	B-8	R624	D-26	R1002	D-29		
C253	B-11	C841	B-11	D493	D-12	Q491	E-11	R349	B-8	R625	D-26	R1003	C-29		
C256	E-13	C842	B-11	D496	B-18	Q621	D-26	R351	D-1	R626	D-27	R1004	C-3		
C272	D-10	C843	B-10	D501	D-5	Q622	D-26	R352	D-1	R627	D-26	R1006	D-29		
C331	E-12	C853	C-18	D602	A-27	Q623	D-26	R353	E-1	R628	D-26	R1007	D-29		
C332	E-12	C854	C-19	D603	B-27	Q701	B-15	R371	E-18	R629	D-26	R1008	D-30		
C343	D-22	C856	D-21	D604	A-27	Q703	C-15	R372	E-18	R701	B-14	R1011	C-29		
C344	B-7	C857	D-21	D605	B-27	Q705	A-15	R373	D-2	R702	B-14	R1012	C-30		
C346	B-8	C858	C-20	D621	C-26	Q721	D-14	R376	D-19	R703	C-15	R1013	C-30		
C351	D-1	C862	C-20	D622	D-26	Q831	A-19	R377	E-18	R704	C-14	R1015	C-13		
C352	D-1	C866	D-19	D623	D-27	Q881	E-19	R400	C-12	R705	C-14	R1016	C-3		
C371	D-2	C1002	C-11	D721	E-14	Q882	E-19	R401	C-12	R706	D-15	R1017	C-3		
C401	C-12	C1003	C-13	D722	E-14	Q901	B-16	R402	B-12	R707	A-14	R1018	C-3		
C403	C-12	C1006	D-29	D801	B-19	Q1001	D-30	R403	B-13	R708	A-14	R1020	D-31		
C404	E-3	C1007	C-29	D802	B-19	Q1002	C-30	R404	E-3	R709	B-15	R1022	D-31		
C405	B-12	C1008	C-3	D803	B-18	Q1003	C-3	R406	E-4	R711	A-15	R1023	C-30		
C406	E-4	C1020	D-31	D831	A-19	Q1021	C-5	R407	E-4	R712	C-15	R1026	D-31		
C407	E-4	C1022	E-13	D834	C-18	Q1022	C-5	R409	E-3	R713	B-15	R1027	C-31		
C408	E-4	C1023	E-13	D836	C-18	R001	D-34	R413	E-7	R715	B-15	R1031	C-4		
C411	E-6	C1031	C-4	D843	C-19	R002	D-34	R418	D-6	R716	C-15	R1032	C-4		
C412	E-6	C1033	B-6	D1001	C-30	R003	D-36	R421							

# MAIN BOARD - TOP VIEW

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**A**



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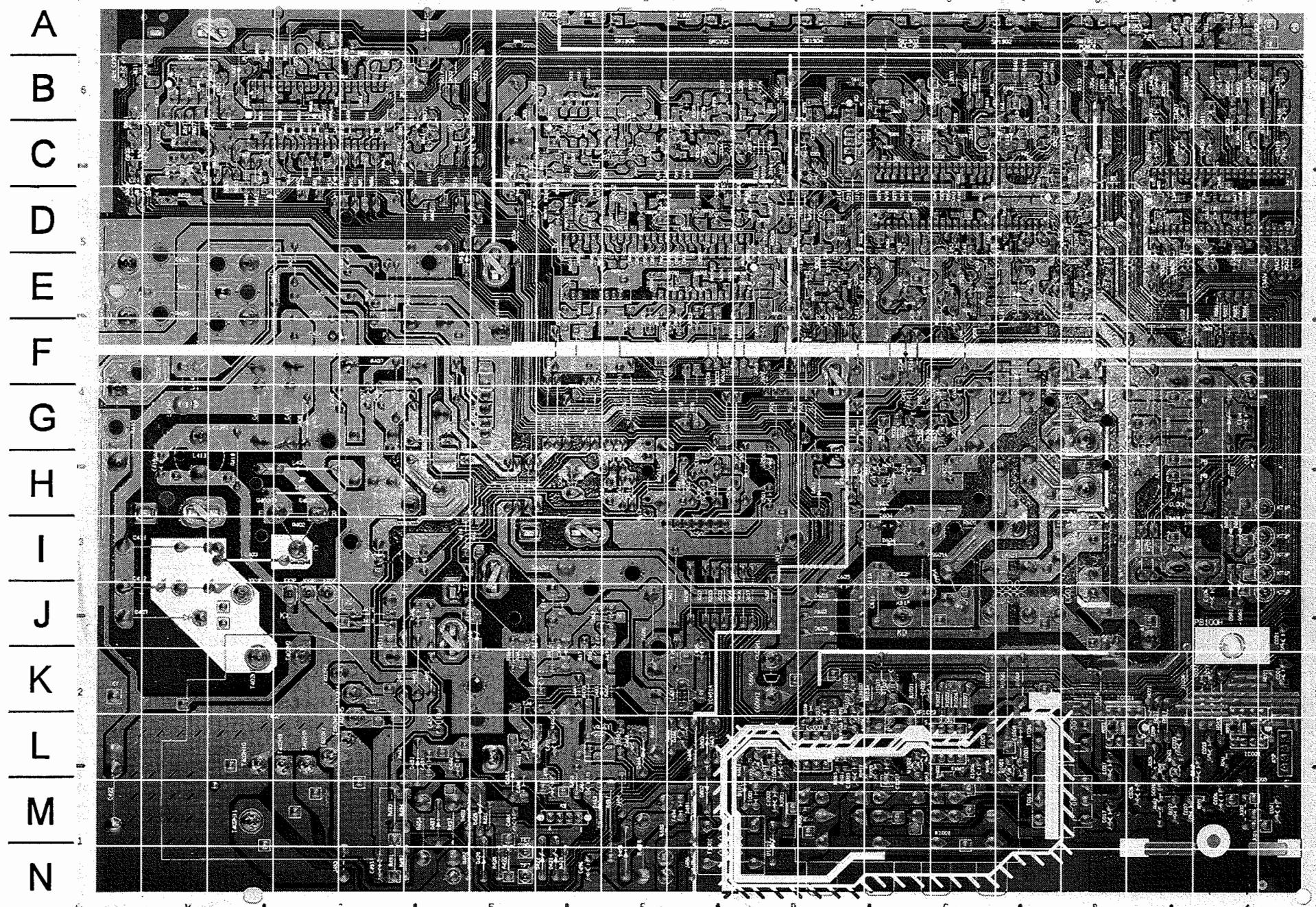
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## MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

A101	G-2	C605	J-8	D621	F-4	Q1022	K-7	R622	G-5	TP50	N-15
A1901	A-2	C606	K-9	D622	F-5	R001	K-1	R624	G-6	TP51	M-15
C001	K-1	C607	E-15	D623	H-7	R017	L-3	R625	G-7	VR1023	L-7
C003	L-2	C622	H-6	D801	H-8	R021	L-3	R626	G-6	X141	E-5
C006	M-2	C623	H-7	D802	M-10	R037	L-3	R628	G-7	X153	C-5
C007	M-2	C806	B-14	D803	L-10	R043	K-2	R803	B-6	X161	C-6
C017	M-4	C811	C-14	D831	C-14	R101	I-3	R804	B-6	X251	D-8
C021	J-1	C822	C-14	D834	C-16	R104	I-3	R807	C-18	X401	D-6
C023	L-3	C829	C-18	D836	E-14	R106	H-14	R808	C-18	X801	B-15
C026	M-3	C831	D-18	D843	B-17	R151	B-5	R820	D-18		
C027	M-3	C832	C-19	D1001	L-6	R161	F-7	R822	C-18		
C037	L-4	C853	B-15	D1003	L-8	R167	C-15	R823	G-12		
C041	M-1	C856	A-16	D1011	M-9	R201	B-7	R827	C-18		
C042	L-2	C1002	M-9	D1012	M-9	R202	B-7	R828	D-19		
C101	H-2	C1003	L-8	D1901	A-3	R212	C-7	R833	J-10		
C104	G-2	C1006	L-6	F601	I-4	R349	C-10	R843	C-17		
C106	J-2	C1007	L-7	IC001	L-1	R353	G-12	R844	C-17		
C131	C-4	C1008	L-9	IC021	L-3	R400	D-7	R847	C-17		
C136	D-6	C1020	L-6	IC101	D-5	R401	H-14	R848	C-17		
C142	D-6	C1022	K-7	IC481	K-10	R402	F-7	R849	C-17		
C147	E-5	C1023	K-8	IC501	I-10	R404	G-14	R851	A-16		
C151	B-5	C1031	K-8	IC601	G-14	R406	G-15	R881	E-2		
C201	B-7	C1033	E-4	IC801	B-17	R407	F-15	R882	E-2		
C208	C-6	C1901	B-19	IC802	B-18	R409	F-8	R883	E-2		
C211	C-8	C1902	A-3	IC3401	C-3	R413	G-19	R884	E-2		
C212	C-7	C3401	C-3	K1001	M-6	R418	H-17	R1001	M-9		
C252	D-6	C3402	B-3	KB	M-12	R421	M-14	R1020	K-5		
C253	E-6	C3404	C-3	KD	J-7	R422	N-13	R1022	K-6		
C256	E-8	C3406	B-3	KS	C-8	R423	N-12	R1023	K-6		
C272	C-8	C3407	B-3	KSP	L-1	R428	N-13	R1026	K-6		
C332	C-13	C3409	C-2	KTP	H-1	R466	L-10	R1027	K-6		
C351	C-8	C3411	B-2	KX	J-17	R469	L-11	R1031	L-8		
C371	E-8	C3412	B-2	L164	C-5	R481	L-15	R1034	K-7		
C401	E-7	C3413	B-2	L166	C-5	R482	N-14	R1901	A-12		
C403	D-7	C3414	C-1	L203	B-8	R483	K-14	R1902	A-3		
C405	E-7	C3416	B-1	L346	C-11	R484	M-14	R1903	A-5		
C406	G-15	C3417	B-1	L401	H-16	R486	J-11	R1904	A-6		
C407	G-15	C3418	B-1	L402	H-16	R488	N-11	R1905	A-8		
C408	G-16	C3419	C-1	L413	H-18	R489	M-10	R1906	A-9		
C411	I-18	C3424	E-1	L801	B-17	R490	L-12	R1907	A-10		
C412	I-19	C3428	E-2	L821	C-15	R491	N-15	R1909	A-16		
C416	G-17	C3432	E-2	L851	A-16	R492	N-14	R3401	B-3		
C417	G-17	C3433	E-2	L1901	A-14	R493	M-15	R3402	B-2		
C421	E-8	C3439	E-3	LF601	J-5	R494	M-14	R3403	C-2		
C422	M-19	D101	H-3	PS601	I-6	R497	M-14	R3404	B-2		
C468	L-11	D102	G-2	Q043	L-3	R498	J-10	R3405	B-2		
C482	L-14	D351	E-7	Q135	D-4	R499	H-8	R3406	C-2		
C483	I-15	D421	N-12	Q202	B-6	R503	G-9	R3407	C-1		
C484	M-13	D422	N-12	Q342	C-10	R504	H-11	R3408	B-1		
C487	L-14	D428	L-14	Q343	C-9	R506	H-11	R3507	B-3		
C489	M-12	D429	N-13	Q371	E-8	R507	H-11	RL601	G-5		
C491	L-12	D466	L-11	Q372	E-8	R508	H-11	SW1901	A-4		
C493	N-15	D481	L-14	Q401	G-14	R509	H-11	SW1902	A-5		
C496	N-12	D482	L-14	Q402	I-16	R511	J-15	SW1903	A-7		
C497	G-7	D483	J-14	Q466	L-10	R517	G-10	SW1904	A-8		
C498	K-10	D484	L-13	Q491	L-13	R518	H-10	SW1905	A-10		
C502	H-9	D486	N-11	Q621	H-7	R601	I-6	SW1906	A-11		
C503	H-11	D487	M-14	Q622	G-6	R602	J-8	T016	M-4		
C504	H-12	D491	M-10	Q623	G-7	R604	E-15	T036	L-4		
C505	F-6	D493	H-8	Q831	C-14	R605	F-14	T131	C-4		
C506	H-10	D496	L-10	Q881	C-19	R606	E-15	T151	D-5		
C509	E-6	D501	H-9	Q882	C-18	R607	E-14	T401	H-15		
C511	I-14	D602	H-7	Q1001	L-5	R608	E-18	T402	L-17		
C516	H-10	D603	J-8	Q1002	L-7	R609	E-18	T1001	M-10		
C601	J-4	D604	I-7	Q1003	L-9	R610	E-14	TE7	N-13		
C604	I-7	D605	J-8	Q1021	L-8	R621	H-4	TP7	N-13		

# MAIN BOARD - BOTTOM VIEW

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## MAIN BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

C002	L-18	C854	B-5	R141	D-15	R351	C-12	R857	B-4
C008	L-17	C857	A-4	R142	D-15	R352	C-12	R858	B-4
C022	L-16	C858	B-5	R143	D-14	R371	E-12	R862	C-5
C103	G-17	C862	C-5	R159	B-15	R372	E-12	R863	A-7
C133	C-15	C866	C-5	R162	D-14	R373	E-12	R864	C-6
C138	D-15	C3400	D-17	R163	B-14	R376	E-12	R867	B-4
C143	D-14	C3403	D-17	R164	C-14	R377	E-12	R886	C-4
C161	D-14	C3408	D-18	R168	C-4	R403	E-13	R887	C-4
C166	C-15	C3410	D-18	R169	B-15	R426	D-13	R1002	L-14
C202	C-14	C3423	D-18	R207	C-14	R485	D-12	R1003	L-13
C209	C-11	C3426	D-18	R251	E-14	R623	H-13	R1004	M-12
C331	C-7	C3427	D-18	R252	E-14	R627	H-13	R1006	L-14
C343	C-10	C3429	D-18	R271	B-12	R813	C-5	R1007	L-14
C344	C-10	C3431	D-18	R272	B-12	R814	C-6	R1008	L-15
C346	C-10	C3440	D-18	R273	C-13	R816	C-6	R1011	L-12
C352	C-14	R002	L-18	R276	B-12	R821	B-3	R1012	L-13
C404	F-12	R003	M-17	R281	D-13	R826	B-3	R1013	L-13
C426	D-13	R022	L-16	R283	D-13	R831	C-4	R1015	L-12
C801	C-2	R023	M-11	R287	C-13	R835	B-3	R1016	L-11
C803	C-14	R035	B-4	R288	C-13	R842	C-3	R1017	L-11
C804	C-14	R041	L-18	R289	C-13	R846	C-4	R1018	L-11
C808	B-2	R042	L-17	R343	C-10	R852	B-3	R1032	L-12
C841	B-12	R133	C-16	R344	D-7	R853	B-5	R1033	L-12
C842	B-13	R136	E-16	R347	C-10	R854	B-5	R1037	K-12
C843	B-13	R137	E-16	R348	C-10	R856	B-4	R3440	D-18

SANYO

MODEL DS27580 (CHASSIS 27580-00)

## PARTS LIST

## SEMICONDUCTORS

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
D101	MTZJ36A	407 100 0204	-	-	-
	RD36EB1	407 056 2307	ECG5037A	NTE5037A	SK36A
D102	MTZJ5.1A	407 063 8606	-	-	-
	MTZJ5.1B	407 099 5204	ECG5010T1	-	-
	RD5.1EB2	407 056 8002	ECG5010A	NTE5010A	SK5A1
	RD5.1EB3	407 056 8200	ECG5010A	NTE5010A	SK5A1
D351	MTZJ12B	407 099 6607	-	-	-
	MTZJ12C	407 063 8408	-	-	-
	RD12EB2	407 054 3207	ECG5021T1	NTE5021T1	SK9971
	RD12EB3	407 054 3306	ECG5021A	NTE5021A	SK12A
# D421, 22	HZ11B2L	407 158 1307	ECG5020A	NTE5020A	SK11A
D428	MTZJ15A	407 099 6904	-	-	-
	RD15EB1	407 054 5706	ECG5023A	NTE5023A	SK14A
D429	DS442X	407 005 4505	ECG519	NTE519	SK3100
	1N4148	407 008 2406	ECG519	NTE519	SK3100
	1SS133	407 012 4406	ECG519	NTE519	SK3100
	1S2076	407 013 4207	ECG177	NTE177	SK9091
	1S2473	407 013 7109	ECG177	NTE177	SK9091
D466	MTZJ10B	407 099 6102	-	-	-
	RD10EB2	407 054 0008	ECG5019A	NTE5019A	SK10A
D481	ERA18-04	407-124-6404	ECG552	NTE552	SK9000
	ES1	407-007-6606	ECG552	NTE552	SK9000
	RMPG06G	407-124-5506	ECG552	NTE552	SK9000
D482	TVR1G	407 011 4407	ECG552	NTE552	SK9000
D483	ERA18-04	407-124-6404	ECG552	NTE552	SK9000
	ES1	407-007-6606	ECG552	NTE552	SK9000
	RMPG06G	407-124-5506	ECG552	NTE552	SK9000
D484, 86	EU2	407 007 7603	ECG552	NTE552	SK9000
	ERB44-04	407 006 4108	ECG552	NTE552	SK9000
D487, 91	ERA15-02	407 005 8602	ECG552	NTE552	SK9000
	MPG06D	407 088 6502	ECG552	NTE552	SK9000
	S5277B	407 011 3004	ECG552	NTE552	SK9000
	1N4002ID	408 009 9404	ECG116	NTE116	SK3311
D493	MTZJ7.5C	407 063 9306	-	-	-
	RD7.5EB3	407 057 6502	ECG5015A	NTE5015A	SK7A5
D496	DS442X	407 005 4505	ECG519	NTE519	SK3100
	1N4148	407 008 2406	ECG519	NTE519	SK3100
	1SS133	407 012 4406	ECG519	NTE519	SK3100
	1S2076	407 013 4207	ECG177	NTE177	SK9091
	1S2473	407 013 7109	ECG177	NTE177	SK9091
D501	ERA15-02	407 005 8602	ECG552	NTE552	SK9000
	MPG06D	407 088 6502	ECG552	NTE552	SK9000
	S5277B	407 011 3004	ECG552	NTE552	SK9000
	1N4002ID	408 009 9404	ECG116	NTE116	SK3311
# D602 Thru # D605	EM2B	407 005 7605	ECG125	NTE125	SK3081
	GP15G	407 008 8606	ECG125	NTE125	SK3081
	1S1887A	407 013 3200	ECG552	NTE552	SK9000
# D621	ERA15-02	407 005 8602	ECG552	NTE552	SK9000
	MPG06D	407 088 6502	ECG552	NTE552	SK9000
	S5277B	407 011 3004	ECG552	NTE552	SK9000
	1N4002ID	408 009 9404	ECG116	NTE116	SK3311

# For SAFETY use only equivalent replacement part.

## SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
D622	DS442X	407 005 4505	ECG519	NTE519	SK3100
	1N4148	407 008 2406	ECG519	NTE519	SK3100
	1SS133	407 012 4406	ECG519	NTE519	SK3100
	1S2076	407 013 4207	ECG177	NTE177	SK9091
	1S2473	407 013 7109	ECG177	NTE177	SK9091
D623	MTZJ5.1A	407 063 8606	-	-	-
	RD5.1EB3	407 056 8200	ECG5010A	NTE5010A	SK5A1
D721, 22	DS442X	407 005 4505	ECG519	NTE519	SK3100
	1N4148	407 008 2406	ECG519	NTE519	SK3100
	1SS133	407 012 4406	ECG519	NTE519	SK3100
	1S2076	407 013 4207	ECG177	NTE177	SK9091
	1S2473	407 013 7109	ECG177	NTE177	SK9091
D801, 02, 03	DS442X	407 005 4505	ECG519	NTE519	SK3100
	1N4148	407 008 2406	ECG519	NTE519	SK3100
	1SS133	407 012 4406	ECG519	NTE519	SK3100
	1S2076	407 013 4207	ECG177	NTE177	SK9091
	1S2473	407 013 7109	ECG177	NTE177	SK9091
D831	MTZJ3.6B	407 065 1308	-	-	-
	RD4.3EB2	407 056 4707	ECG5008A	NTE5008A	SK4A3
D834	MTZJ18A	407 099 7505	-	-	-
	RD18EB1	407 054 8301	ECG5027A	NTE5027A	SK18A
D836, 43	DS442X	407 005 4505	ECG519	NTE519	SK3100
	1N4148	407 008 2406	ECG519	NTE519	SK3100
	1SS133	407 012 4406	ECG519	NTE519	SK3100
	1S2076	407 013 4207	ECG177	NTE177	SK9091
	1S2473	407 013 7109	ECG177	NTE177	SK9091
# D1001	PC917	-	-	-	-
	PC827C	407 145 3703	-	-	-
	PC827D	407 176 6100	-	-	-
	TLP521-2-BL	407 176 6209	-	-	-
# D1003	PC917XS	407 205 1601	-	-	-
D1011	ERA18-04	407-124-6404	ECG552	NTE552	SK9000
	ES1	407-007-6606	ECG552	NTE552	SK9000
	RMPG06G	407-124-5506	ECG552	NTE552	SK9000
	D1012	MTZJ12C	407 063 8408	-	-
	D1901	MTZJ5.1A	407 063 8606	-	-
	IC001, 21	RD5.1EB2	407 056 8002	ECG5010A	NTE5010A
	IC101	TDA7231A	409 343 0409	-	-
	IC481	LA76170	409 412 7407	-	-
	IC481	BA178M09T	409 367 2809	NTE1966	NTE1966
	IC481	MC78M09CT	409 370 0007	-	-
	IC481	UPC78M09AHF	409 366 7904	-	-
# IC501	LA7841	409 340 1904	-	-	-
# IC601	STR30130	409 243 0806	ECG1777	NTE1777	SK9870
IC801	M37272M6-300SP	-	-	-	-
	M37272M8-SP	410 299 0207	-	-	-
IC802	24LC01B/P	-	-	-	-
	ST24C02B6	409 376 1503	-	-	-
	24LC02B/P	409 333 3700	-	-	-
IC3401	UPC1851CU	409 392 2805	-	-	-

# For SAFETY use only equivalent replacement part.

## PARTS LIST continued

## SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
Q043	2SC1740S-Q	405 011 8401	ECG85	NTE85	SK3122
	2SC1740S-R	405 011 8500	ECG85	NTE85	SK3122
	2SC1740S-S	405 011 8609	ECG85	NTE85	SK3122
	2SC1815-GR	405 012 2002	ECG85	NTE85	SK3124A
	2SC1815-O	405 012 2101	ECG85	NTE85	SK3124A
	2SC1815-Y	405 012 2309	ECG85	NTE85	SK3124A
	2SC945A-PA	405 020 7501	ECG85	NTE85	SK3124A
	2SC945A-QA	405 020 7709	ECG85	NTE85	SK3124A
	2SC945A-RA	405 020 7907	ECG85	NTE85	SK3124A
	2SC1740S-Q	405 011 8401	ECG85	NTE85	SK3122
Q135	2SC1740S-R	405 011 8500	ECG85	NTE85	SK3122
	2SC1740S-S	405 011 8609	ECG85	NTE85	SK3122
	2SC1815-GR	405 012 2002	ECG85	NTE85	SK3124A
	2SC1815-O	405 012 2101	ECG85	NTE85	SK3124A
	2SC1815-Y	405 012 2309	ECG85	NTE85	SK3124A
	2SC945A-PA	405 020 7501	ECG85	NTE85	SK3124A
	2SC945A-QA	405 020 7709	ECG85	NTE85	SK3124A
	2SC945A-RA	405 020 7907	ECG85	NTE85	SK3124A
	2SC1740S-Q	405 011 8401	ECG85	NTE85	SK3122
	2SC1740S-R	405 011 8500	ECG85	NTE85	SK3122
Q202	2SC1740S-S	405 011 8609	ECG85	NTE85	SK3122
	2SC1815-GR	405 012 2002	ECG85	NTE85	SK3124A
	2SC1815-O	405 012 2101	ECG85	NTE85	SK3124A
	2SC1815-Y	405 012 2309	ECG85	NTE85	SK3124A
	2SC945A-PA	405 020 7501	ECG85	NTE85	SK3124A
	2SC945A-QA	405 020 7709	ECG85	NTE85	SK3124A
	2SC945A-RA	405 020 7907	ECG85	NTE85	SK3124A
	2SC1740S-Q	405 011 8401	ECG85	NTE85	SK3122
	2SC1740S-R	405 011 8500	ECG85	NTE85	SK3122
	2SC1740S-S	405 011 8609	ECG85	NTE85	SK3122
Q342, 43	2SC1815-GR	405 012 2002	ECG85	NTE85	SK3124A
	2SC1815-O	405 012 2101	ECG85	NTE85	SK3124A
	2SC1815-Y	405 012 2309	ECG85	NTE85	SK3124A
	2SC945A-PA	405 020 7501	ECG85	NTE85	SK3124A
	2SC945A-QA	405 020 7709	ECG85	NTE85	SK3124A
	2SC945A-RA	405 020 7907	ECG85	NTE85	SK3124A
	2SC1740S-Q	405 011 8401	ECG85	NTE85	SK3122
	2SC1740S-R	405 011 8500	ECG85	NTE85	SK3122
	2SC1740S-S	405 011 8609	ECG85	NTE85	SK3122
	2SC1815-GR	405 012 2002	ECG85	NTE85	SK3124A
Q371, 72	2SC1815-O	405 012 2101	ECG85	NTE85	SK3124A
	2SC1815-Y	405 012 2309	ECG85	NTE85	SK3124A
	2SC945A-PA	405 020 7501	ECG85	NTE85	SK3124A
	2SC945A-QA	405 020 7709	ECG85	NTE85	SK3124A
	2SC945A-RA	405 020 7907	ECG85	NTE85	SK3124A
	2SA1015-O(SAN)	405 001 7407	ECG290A	NTE290A	SK9132
	2SA1015-GR(SAN)	406 000 6804	ECG290A	NTE290A	SK9132
	2SA1015-O(SAN)	405 001 7407	ECG290A	NTE290A	SK9132
	2SA1015-Y(SAN)	405 001 7605	ECG290A	NTE290A	SK9132
	2SA564A-Q(CU)	405 004 3109	ECG290A	NTE290A	SK3932
Q401	2SA564A-R(CU)	405 004 3208	ECG290A	NTE290A	SK3932
	2SA933S-Q	405 006 1707	ECG290A	NTE290A	SK9132
	2SC2271-D	405 029 7106	ECG399	NTE399	SK9352
	2SC2271-D-CTV	405 013 6207	ECG399	NTE399	SK9352
	2SC2271-E	405 029 7205	ECG399	NTE399	SK9352
	2SC2271-E-CTV	405 013 6306	ECG399	NTE399	SK9352
	2SD1879-CTV-YB	405 082 2407	ECG2331	NTE2331	SK10088
	2SD400-E-MP	405 023 5009	ECG382	NTE382	SK3849
	2SD400-F-MP	405 023 5306	ECG382	NTE382	SK3849

# For SAFETY use only equivalent replacement part.

## SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
Q621, 22	2SC1740S-Q	405 011 8401	ECG85	NTE85	SK3122
	2SC1740S-R	405 011 8500	ECG85	NTE85	SK3122
	2SC1740S-S	405 011 8609	ECG85	NTE85	SK3122
	2SC1815-GR	405 012 2002	ECG85	NTE85	SK3124A
	2SC1815-O	405 012 2101	ECG85	NTE85	SK3124A
	2SC1815-Y	405 012 2309	ECG85	NTE85	SK3124A
	2SC945A-PA	405 020 7501	ECG85	NTE85	SK3124A
	2SC945A-QA	405 020 7709	ECG85	NTE85	SK3124A
	2SC945A-RA	405 020 7907	ECG85	NTE85	SK3124A
	2SA1015-GR(SAN)	406 000 6804	ECG290A	NTE290A	SK9132
Q623	2SA1015-O(SAN)	405 001 7407	ECG290A	NTE290A	SK9132
	2SA1015-Y(SAN)	405 001 7605	ECG290A	NTE290A	SK9132
	2SA564A-Q(CU)	405 004 3109	ECG290A	NTE290A	SK3932
	2SA564A-R(CU)	405 004 3208	ECG290A	NTE290A	SK3932
	2SA933S-Q	405 006 1707	ECG290A	NTE290A	SK9132
	2SA933S-R	405 006 1806	ECG290A	NTE290A	SK9132
	2SA1015-GR(SAN)	406 000 6804	ECG290A	NTE290A	SK9132
	2SA1015-O(SAN)	405 001 7407	ECG290A	NTE290A	SK9132
	2SA1015-Y(SAN)	405 001 7605	ECG290A	NTE290A	SK9132
	2SA564A-Q(CU)	405 004 3109	ECG290A	NTE290A	SK3932
Q701, 03, 05	2SA564A-R(CU)	405 004 3208	ECG290A	NTE290A	SK3932
	2SA933S-Q	405 006 1707	ECG290A	NTE290A	SK9132
	2SC3620(LB-SAN-1)	406 000 3605	ECG157	NTE157	SK3747
	2SC2621-C-RA	405 066 4304	ECG157	NTE157	SK3747
	2SC2621-D-RA	405 041 6507	ECG157	NTE157	SK3747
	2SC2621-E-RA	405 041 6705	ECG157	NTE157	SK3747
	2SC2688(1)-K	405 066 9903	ECG157	NTE157	SK3747
	2SC2688(1)-L	405 067 0008	ECG157	NTE157	SK3747
	2SC2688(1)-M	405 067 0107	ECG157	NTE157	SK3747
	2SA1015-GR(SAN)	406 000 6804	ECG290A	NTE290A	SK9132
Q721	2SA1015-O(SAN)	405 001 7407	ECG290A	NTE290A	SK9132
	2SA1015-Y(SAN)	405 001 7605	ECG290A	NTE290A	SK9132
	2SA564A-Q(CU)	405 004 3109	ECG290A	NTE290A	SK3932
	2SA564A-R(CU)	405 004 3208	ECG290A	NTE290A	SK3932
	2SA933S-Q	405 006 1707	ECG290A	NTE290A	SK9132
	2SA933S-R				

## PARTS LIST continued

### SEMICONDUCTORS continued

(Select the replacement that gives the best results.)

Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
Q1021, 22	2SC1740S-Q	405 011 8401	ECG85	NTE85	SK3122
	2SC1740S-R	405 011 8500	ECG85	NTE85	SK3122
	2SC1740S-S	405 011 8609	ECG85	NTE85	SK3122
	2SC1815-GR	405 012 2002	ECG85	NTE85	SK3124A
	2SC1815-Y	405 012 2309	ECG85	NTE85	SK3124A
	2SC945A-PA	405 020 7501	ECG85	NTE85	SK3124A
	2SC945A-QA	405 020 7709	ECG85	NTE85	SK3124A

### COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
L164	15 $\mu$ H	645 003 9713
	15 $\mu$ H	645 016 2657
L166	33 $\mu$ H	645 003 9812
	33 $\mu$ H	645 016 2985
L203	5.6 $\mu$ H	645 008 2894
	5.6 $\mu$ H	645 016 3104
L346	10 $\mu$ H	610 031 3873
	10 $\mu$ H	645 016 2534
L401	3.3 $\mu$ H	645 017 7675
L402	Ferrite Bead	610 031 9998
# L413	Horizontal Linearity	645 025 4413
L801, 21, 51	5.6 $\mu$ H	645 008 2894
	5.6 $\mu$ H	645 016 3104
# L901	Degaussing	645 030 1902
# L902 (2)	Yoke Horiz 1.1mH Vert 17.7mH	-
L1901	5.6 $\mu$ H	645 008 2894
	5.6 $\mu$ H	645 016 3104
# LF601	Line Filter	610 031 5938
	Line Filter	610 223 1212
	Line Filter	645 017 6159
	Line Filter	-
# T016	Audio Output	645 009 0035
# T036	Audio Output	645 009 0035
T131	FM Detect	645 027 6095
T151	VCO, 45.75MHz	645 027 6088
# T401	Horizontal Driver	610 000 1138
	Horizontal Driver	610 223 1663
# T402 (1)	Horizontal Output	645 018 9579
# T1001	Pulse	645 011 6032
	Pulse	645 011 8081
	Pulse	610 229 9007

# For SAFETY use only equivalent replacement part.

(1) Screen and Focus controls are part of T402.

(2) Bonded part of CRT.

### CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# PS601	8 Cold PTC	408 006 7304	-
# R101	2.2 5% 1/4W	401 015 6603	QW2D2
# R104	180 5% 1/4W	401 015 1608	QW118
# R401, 02	3900 5% 2W	401 068 0207	2W239
# R407	6800 5% 2W	401 069 3702	2W268
# R413	4.7 10% 7W Wirewound	402 076 0005	-
# R418	2700 5% 1/2W Nonflammable	401 009 1607	HW227
# R421	1000 1% 1/6W	401 052 6505	-
	1650 1% 1/6W	-	-
# R422	10K 1% 1/6W	401 052 6802	-
# R423	3300 1% 1/6W	401 053 2605	-
# R469	27 5% 1W	401 060 6405	1W027
# R481	47 5% 1/2W Nonflammable	401 010 2600	HW047
# R482	10 5% 1/4W Nonflammable	401 011 9004	QW010
# R483	1 5% 1/2W Nonflammable	401 006 7701	HW1D0
# R484	1.5 5% 1W	401 057 9907	1W1D5
# R486	27 5% 2W	401 066 9103	2W027
# R488	2.2 5% 1W	401 059 9608	1W2D2
# R489	4.7 5% 2W	401 068 1600	2W4D7
R492	33K 1% 1/6W	401 115 8504	-
# R497	1 5% 2W	401 064 3806	2W1D0
# R507	.82 5% 1W	401 057 7507	1WD82
# R511	330 5% 1W	401 061 2505	1W133
# R601	1.8 10% 8W Wirewound	402 071 3001	-
	1.8 10% 7W Wirewound	402 072 3109	-
# R606	47 5% 1/2W Nonflammable	401 010 2600	HW047
# R607	12 5% 2W	401 065 1801	2W012
# R608	190 5% 10W Wirewound	402 078 6302	-
# R609	220 5% 10W Wirewound	402 074 7600	10W122
# R610	12 5% 2W	401 065 1801	2W012
# R621	820 10% 6W Wirewound	402 078 6203	-
# R622	270 5% 2W	401 067 0000	2W127
# R624	330 5% 1W	401 061 2505	1W133
# R625	5600 5% 1/6W	401 027 2600	-
# R711, 12, 13	12K 5% 1W	401 065 4604	1W312
# R1020	3.3M 10% 1/2W	402 000 0705	HW533
R3406	16.5K 1% 1/16W	401 256 8008	-
VR1023	1000 Video Input	645 006 5415	-
	1000 Video Input	610 232 7861	-
	1000 Video Input	645 022 9503	-

# For SAFETY use only equivalent replacement part.

## PARTS LIST continued

## CAPACITORS &amp; ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
# C411	.012 3% 1.5kV	404 066 4109
# C412	.0015 10% 3kV	403 254 9506
	.0015 10% 3kV	403 232 2604
# C416	.27 5% 200V	
	.2 5% 200V	403 082 8019
# C417	.33 5% 200V	403 082 9818
C493	2.2μF 20% 100V NP	404 056 5307
# C601	.068 10% 250VAC	404 072 7903
	.068 10% 275VAC	404 073 7506
# C604, 05	.001 10% 500V	403 075 7111
# C708	.001 +80% -20% 2kV	403 175 3419
	.001 +80% -20% 2kV	403 077 2807
# C1020	.0022 20% 125VAC	404 008 6802
C3406	4.7μF 20% 25V NP	403 166 1605
C3412	3.3μF 10% 10V Tantalum	403 090 6004
C3414	10μF 10% 10V Tantalum	403 090 3607

# For SAFETY use only equivalent replacement part.

## CABINET PARTS

Item	Mfr. Part No.
Badge (SANYO)	610 236 9274
Button Unit	610 257 8614
Cabinet Front Assembly	610 272 8095
Cabinet Rear	610 271 5676
Remote Control Lens	610 265 3786

**Remote Transmitter**

Battery Cover	610 271 7112
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## MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# A101 (1)	Tuner	645 027 5203	UHF/VHF, 1AV4F1BAM0190
# A101H	Block	645 011 9682	Antenna
A1901	Receiver	645 027 4213	Remote
# F601	Fuse	423 018 8101	4Amp, 125V Fast Acting
	Fuse	423 007 1601	4Amp, 125V Fast Acting
	Fuse	423 007 1809	4Amp, 125V Fast Acting
F601	Fuse Holder	645 000 5077	For F601
	Fuse Holder	645 016 0479	For F601
F602	Fuse Holder	645 000 5077	For F601
	Fuse Holder	645 016 0479	For F601
# K701A	Socket	645 025 6103	CRT
K1001	Jack	645 001 6097	Assembly
# Q901	CRT	414 009 7005	A68ADT25X03
# RL601	Relay	645 000 4155	Power
	Relay	645 011 2713	Power
	Relay	645 024 7828	Power
	Relay	645 015 8629	Power
SP901	Speaker	610 055 6614	3" X 3", 8 Ohms, 2W
SP902	Speaker	610 055 6614	3" X 3", 8 Ohms, 2W
SW1901	Switch	645 004 3062	Power
SW1902	Switch	645 004 3062	Volume Up
SW1903	Switch	645 004 3062	Volume Down
SW1904	Switch	645 004 3062	Channel Up
SW1905	Switch	645 004 3062	Channel Down
SW1906	Switch	645 004 3062	Menu
# W601	Line Cord	645 014 2444	AC, Polarized
	Line Cord	645 023 1698	AC, Polarized
X141	Filter	421 006 3206	SAW
X153	Filter	610 015 2946	4.5MHz
X161	Trap	610 015 3059	4.5MHz
X251	Crystal	610 204 4195	3.58MHz
	Crystal	610 245 9746	3.58MHz
	Crystal	610 012 0655	3.58MHz
X401	Crystal	645 020 9147	507.5kHz
X801	Crystal	645 000 6692	8 MHz
	Crystal	645 021 5483	8 MHz
	PC Board	610 270 9407	CRT
	PC Board	610 272 1294	Main
	Transmitter	645 026 8182	Remote
	Transmitter	645 026 8090	Remote

# For SAFETY use only equivalent replacement part.